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ABSTRACT

A research study addressed the question: "If new and different information about some aspect of reality can produce attitude changes, can this be empirically verified in the case of foundational studies in teacher education?" Four hundred ninety education students, during the first two weeks of their required education classes, responded to two attitude assessments: a questionnaire of 50 Likert-type items that sampled attitudes about American schools, multicultural education, human development, mainstreaming, and teacher education; and a semantic differential scale with 36 paired terms for obtaining attitudinal responses about American schools, mainstreaming, human development, and teacher education. Students answered the two questionnaires again at the end of the semester. A statistical analysis of responses supports the conclusion that, while course enrollments are associated with differing attitudinal responses on pre- and post-measures, the manner in which the specific courses influence these shifts in attitudes is not clear. Responses indicated attitude shifts in both desirable and negative directions. Support was found for the thesis that some attitudes are susceptible to change which can be detected over a brief span of time. Tables provide information on student responses to the questionnaires. (JD)

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Impact of Professional Courses on Preservice Educational Personnel Attitudes Toward Major Aspects of American Education

Paper presented at the 1981 Regional Mini-Clinic
of the Association for Teacher Education

April 10-11, 1981

Southern Illinois University
Carbondale, Illinois

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Data collection and statistical analyses performed with support from the Mid-South Teacher Corps, Bruce Walker, Director.

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Impact of Professional Courses on Preservice
Educational Personnel Attitudes Toward Major Aspects
of American Education

Major efforts have been made in recent months and years to achieve a conceptual framework through which college and university programs designed to prepare American teachers can be analyzed, evaluated, and reformed. One effort seeks to specify the "professional culture" which schools of education might seek to nurture, maintain and transmit (Howsam, 1976; Lortie, 1975). Another effort is associated with reforms in pedagogical education such as the case made by B.O. Smith (1980). While Smith recognizes the advances made by current teachers having "...more academic knowledge, better understanding of human development, more positive attitudes toward children, and more competence in the procedures and techniques of teaching...," he forcefully calls attention to an "absence of common beliefs" found among faculties of schools of pedagogy. He claims these faculties are comparable to what would exist in schools of medicine made up of "chiropractors, osteopaths, shamans, and faith healers along with physicians and surgeons." Moreover, he labels the current strategy of education professors tolerating differences and cleavages among themselves as "wallowing in confusion with false hope."

If Smith's assessment is accurate, the prospect for achieving agreement on what might be called "professional culture" does not appear to be good. For the time being, we will probably continue to view teaching as a "semi-profession" and continue to certify those aspiring to become teachers upon the completion of specified number of courses and preprofessional laboratory experiences. While we cannot obtain widespread consensus on what competencies,

attitudes, and value commitments students should reflect upon completion of our programs, or what they should possess when they present themselves as initial candidates, we do seem to share a general confidence that our courses, laboratory experiences, and internships collectively develop those behaviors and practices which will successfully facilitate improved education in American schools. Yet we know little about how a given course, sequence of courses, or even a total program of undergraduate preparation, contributes to the formation of practices, values, and attitudes associated with quality classroom instruction.

The research presented here emerged from the recognized need to know more about attitudinal predispositions of students beginning their undergraduate studies in professional education courses, those commonly known as "foundational." Also, the research sought to determine if the courses, individually or collectively, produced changes in attitudes which might be detected through attitude scales focusing on the knowledge domains stressed in the introductory courses.

The theoretical perspective undergirding the research was that if attitudes are learned, and if attitudes change as a result of learning, then foundation courses should produce modified student attitudes once course materials or field experiences have been successfully completed. Also, it was theorized that learnings based on specialized course materials and instructional objectives focusing on the institution of American schooling, principles of human development, and the nature of human exceptionality, should impact differently on the attitudinal predispositions of students. That is, knowledge focusing on the historical, legal, and cultural factors influencing the policies and practices of American education should directly contribute to the formation, or change of attitudes, identifiable with the formal institution of schooling. Knowledge regarding human development should influence

those predispositions involving the nature of human beings, their learning and development. The research question which this study sought to answer was: If new and different information about some aspect of reality can produce attitude changes, can this be empirically verified in the case of foundational studies in teacher education?

PROCEDURES

The research involved attitude assessment of teacher education candidates enrolled in one or more lower division introductory courses in professional studies in the 1980 spring semester. The subjects, totally 490 for whom complete demographic information and pre-post assessments were obtained, were enrolled in one or more sophomore level courses in the College of Education, Memphis State University. The courses were:

> SPER 2000. Introduction to Exceptional Children (3) Overview of special education including the historical perspective of the field. Emphasis is placed on the characteristics and education of children and youth in each area of exceptionality.
>
> EDFD 2011. Foundations of Educational Thought & Practice (3) Origins, influences, and consequences of formal schooling in selected historical and contemporary contexts. Focus is on developing a critical perspective of policy proposals and resulting educational designs.
>
> EDPS 2111. Human Growth & Development (3) A life-span approach to the principles and processes of human growth and development applied to the educative process.

These are required core courses for all students who seek teacher certification. They are also used as elective courses by students in other colleges and the course in human development is a requirement in the university's undergraduate nursing program. In a given semester, 8 to 10 sections of each course are taught by faculty personnel with specialized preparations in the content areas. Also, laboratory and field experiences are requirements of all three courses, though considerable variations exist due to faculty preferences, hours when the courses are scheduled, and composition of student

groups in the multiple sections. Enrollments in the course sections are typically limited to 25 with class sizes ranging from 12 to as many as 30.

Subjects

Subjects comprising the final sample used in the data analysis included 94 enrolled in EDFD 2011, 129 in EDPS 2111, 184 in SPER 2000, and 83 enrolled in more than one of the courses. When the sample was analyzed on the basis of total course enrollments, 407 subjects were enrolled in only one of the courses in the spring semester, 55 were enrolled in two of the courses, 12 were enrolled in all three courses offered in the regular on-campus schedule, and 16 were enrolled in a three course field-based arrangement taught in a local public school as part of a Teacher Corp Project. Subjects for whom there was incomplete demographic data, or missing pre and post assessments, were excluded from the sample. No information was obtained regarding what courses subjects had completed prior to the present semester or if they were repeating the course(s).

Attitude Scales

Two scales were developed for obtaining the pre and post attitude assessments in this project. One scale, a questionnaire of 50 Likert-type items, was designed to sample attitudes about the American school (21 items), multicultural education (9 items as a subset of the American school items), human development (10 items), mainstreaming and/or special education (6 items), and teacher education (8 items). Five additional items were contained in the total scale but were not used in the five subscales. Tables I and II contain the total list of questionnaire items and each item is coded according to the subscale in which it was placed. In order to control for reponse set, 24 of the items were stated negatively. In the statistical treatment, data for the negative items have been reversed. Response options on the scale were 1 for strong disagreement, 2 for disagreement, 3 for agreement, and 4 for strong agreement.

Table I

Total Group Pre and Post Means and Standard Deviations for the Attitude Scale (N=490)

	Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1. Equality in education exists in most public schools. (1)	2.52	.95	2.60	.99
2. Special classes for exceptional children do more harm than good. * (3)	3.41	.84	3.42	.83
3. Public funds should be used to help finance private and parochial schools. * a	3.16	1.03	3.13	1.11
4. A variety of instructional materials and innovative strategies are reflected in most public schools today. (1)	2.69	.90	2.63	.83
5. Public schools today are places where children and youth enjoy spending 12 or more years of their lives. (1)	2.17	.96	2.17	.93
6. Curriculum content in today's schools is essentially the same as it was in the 1940s and 1950s. * (1)	3.35	.85	3.30	.96
7. There are certain attitudes every teacher should have. a	1.63	.91	1.63	.85
8. There is one right way to train a teacher. * (4)	3.45	.81	3.47	.87
9. Learning problems can be solved with sensitive and resourceful teachers. (3)	3.35	.75	3.18	.81
10. Schools are doing a good job in helping children and youth modify some of the cultural stereotypes held by adults. (1) (5)	2.61	.86	2.56	.86
11. Teachers should avoid discussing with students those community problems that involve minority groups. * (1) (5)	3.50	.81	3.39	.90
12. Children today have it easier than we did when we were young. * (2)	3.02	1.04	3.02	1.05

Table I

	Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
13. In order to fully understand human growth & development, it is necessary to interact with children & adults. (2)	3.71	.58	3.61	.65
14. My self-image is the most important factor determining by behavior. (2)	3.40	.80	3.38	.79
15. People are basically able to cope with problems confronting them. (2)	2.73	.84	2.79	.78
16. Intercultural contacts within the school setting demonstrate the inherent superiority of some cultures.*(1)(5)	2.75	.94	2.84	.94
17. Classroom discipline should be adjusted to match the type of discipline the child has experienced at home. (1)	1.69	.89	1.79	.88
18. The neighborhood school concept is one that should be valued by all segments of the community. * (1)	1.63	.82	1.72	.85
19. Human beings grow and develop in lawful and predictable ways. (2)	2.17	.91	2.28	.89
20. Ability to teach is something you have naturally and this cannot be taught. * (4)	3.03	.90	3.04	.97
21. Most classrooms do not adapt to individual difference in children. * (3)	2.17	.89	2.20	.91
22. There are certain competencies every teacher must have & they should be tested for these competencies. * a	1.66	.80	1.70	.84
23. Parents of inner-city youngsters are not really interested in how or what their children do in school.* (1) (5)	3.15	.89	3.09	.93
24. Inner-city schools are definitely inferior to those found in the suburban areas. * (1) (5)	2.80	.93	2.68	.98
25. Consideration should be given to eliminating compulsory school attendance requirements. a	3.39	.90	3.34	1.02
26. It's important for prospective teachers to spend a lot of time in K-12 schools with students. (4)	3.19	.85	3.19	.81

Table I

	Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
27. The instructors in education courses should be good role models for prospective teachers. (4)	3.57	.68	3.57	.67
28. Labeling a child 'retarded', 'disturbed', 'blind' is inappropriate. (3)	2.93	1.05	2.81	1.14
29. People generally do not do the best they can under the circumstances. * (2)	2.43	.96	2.53	.98
30. The most important courses in my bachelor's program are my education courses. (4)	2.67	1.08	2.66	1.09
31. Parents should have more to say about the way schools are run & the way children are taught. (1)	2.95	.90	2.93	.93
32. Exceptional children require a curriculum radically different from normal children. * a	2.48	.93	2.56	.95
33. Grouping of children according to standardized test scores is an acceptable educational practice. * (1)	3.05	.91	3.04	.96
34. The majority of teachers do an adequate job. (1)	2.62	.86	2.57	.84
35. There is the opportunity in the teacher preparation program for me to pursue some of my own interests. (4)	3.10	.83	2.98	.85
36. Knowing the cause of a child's handicap is not necessary to planning appropriate learning experiences. * (3)	3.25	.97	3.02	1.18
37. I believe that teaching in an inner-city school would be a personally rewarding experience. (1) (5)	2.76	.97	2.73	.97
38. Differences in achievement between inner-city children & others can be attributed to genetics & heredity. *(1)(5)	3.13	.95	3.11	.96
39. How we behave depends ~~on how I see~~ a situation. (2)	3.40	.67	3.29	.79
40. Legal rights of children & youth are being adequately protected in most schools today. (1)	2.80	.85	2.72	.88

Table I

	Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
41. Education courses are easy. * (4)	2.83	.85	2.77	.95
42. Public education adequately serves most handicapped individuals. (3)	1.98	.85	2.13	.92
43. Present use of I.Q. tests is frequently inappropriate. (1)	2.97	.87	3.04	.89
44. Schools should have students representing various socio-economic, racial, & religious groups. (1) (5)	2.89	.90	2.93	.91
45. Human behavior is generally not rational or understandable. * (2)	2.97	.91	2.95	.91
46. The first few years of life are not important in the development of adult personality. * (2)	3.49	1.00	3.46	1.06
47. All students should be expected to attain the same standards of achievement, regardless of their family backgrounds and, personal motivations. * (1) (5)	2.98	1.14	3.04	1.07
48. Most school administrators are concerned about the intellectual, moral, and social development of each learner. (1)	2.49	.91	2.49	.92
49. Education courses are not practical. * (4)	3.50	.71	3.36	.85
50. Children have the ability to think like adults. * (2)	2.77	1.07	2.94	1.07

* Negative statements. Statistics reported reflect reverse scoring.

a Not used in a subscale

1. American School Scale
2. Human Development Scale
3. Special Education Scale
4. Teacher Education Scale
5. Multicultural Education Scale

Table II. Group Means and Standard Deviations (N=4)

	2011 N=94				2111 N=129				2000 N=184				Other N=83			
	Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1. Equality in education exists in most public schools.(1)	2.71	.95	2.78	1.03	2.33	.96	2.53	1.01	2.53	.94	2.57	.98	2.55	.90	2.55	.91
2. Special classes for exceptional children do more harm than good. * (3)	3.31	.87	3.38	.94	3.44	.88	3.46	.78	3.45	.83	3.37	.83	3.37	.76	3.52	.75
3. Public funds should be used to help finance private and parochial schools. * a	3.22	1.04	3.09	1.09	3.22	1.03	3.18	1.09	3.11	1.04	3.15	1.13	3.08	1.03	3.08	1.11
4. A variety of instructional materials and innovative strategies are reflected in most public schools today. (1)	2.73	.92	2.73	.79	2.54	.92	2.52	.85	2.74	.88	2.65	.87	2.72	.90	2.67	.75
5. Public schools today are places where children and youth enjoy spending 12 or more years of their lives.(1)	2.34	.97	2.40	.99	2.02	.96	2.11	.94	2.14	.94	2.08	.92	2.25	.96	2.20	.94
6. Curriculum content in today's schools is essentially the same as it was in the 1940s and 1950s. * (1)	3.23	.95	3.21	.94	3.42	.77	3.31	.93	3.30	.87	3.33	1.01	3.47	.77	3.28	.91
7. There are certain attitudes every teacher should have. a	1.51	.74	1.72	.89	1.70	.97	1.56	.84	1.64	.93	1.64	.86	1.68	.95	1.59	.84
8. There is one right way to train a teacher. * (4)	3.32	.88	3.24	1.01	3.32	.87	3.50	.74	3.55	.72	3.52	.93	3.55	.74	3.59	.69
9. Learning problems can be solved with sensitive and resourceful teachers. (3)	3.33	.81	3.16	.87	3.43	.73	3.28	.75	3.34	.73	3.09	.84	3.24	.74	3.25	.73
10. Schools are doing a good job in helping children and youth modify some of the cultural stereotypes held by adults. (1) (5)	2.67	.85	2.76	.86	2.51	.88	2.49	.85	2.60	.82	2.51	.87	2.70	.91	2.57	.80
11. Teachers should avoid discussing with students those community problems that involve minority groups.*(1) (5)	3.40	.86	3.18	.95	3.50	.84	3.42	.87	3.59	.73	3.47	.86	3.43	.86	3.39	.96
12. Children today have it easier than we did when we were young. * (2)	2.99	1.00	2.88	.99	3.12	1.02	3.06	1.10	2.99	1.06	3.05	1.08	2.99	1.02	3.04	.98

Table 21

	2011-N=94				2111-N=129				2000-N=184				Other-N=83			
	Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
13. In order to fully understand human growth & development, it is necessary to interact with children & adults. (2)	3.62	.69	3.57	.58	3.72	.52	3.67	.59	3.71	.62	3.60	.71	3.80	.41	3.63	.69
14. My self-image is the most important factor determining by behavior. (2)	3.26	.82	3.29	.80	3.50	.77	3.49	.76	3.36	.85	3.34	.83	3.46	.71	3.42	.72
15. People are basically able to cope with problems confronting them. (2)	2.82	.86	2.80	.75	2.66	.86	2.87	.75	2.68	.84	2.71	.82	2.86	.77	2.82	.75
16. Intercultural contacts within the school setting demonstrate the inherent superiority of some cultures. * (1)(5)	2.77	.87	2.81	.93	2.75	.95	2.71	.91	2.74	.98	2.90	.97	2.77	.90	2.92	.90
17. Classroom discipline should be adjusted to match the type of discipline the child has experienced at home. (1)	1.77	.97	1.89	.95	1.70	.82	1.87	.91	1.63	.87	1.68	.86	1.73	.96	1.78	.80
18. The neighborhood school concept is one that should be valued by all segments of the community. * (1)	1.73	.93	1.77	.86	1.60	.77	1.63	.81	1.59	.81	1.72	.88	1.64	.81	1.82	.86
19. Human beings grow and develop in lawful and predictable ways. (2)	2.19	.94	2.31	.87	2.19	.91	2.45	.91	2.11	.88	2.12	.86	2.24	.94	2.31	.91
20. Ability to teach is something you have naturally and this cannot be taught. * (4)	2.97	.89	3.00	1.03	3.01	.91	2.98	.89	3.07	.94	3.05	1.01	3.06	.83	3.13	.96
21. Most classrooms do not adapt to individual difference in children. * (3)	2.29	.88	2.28	.88	2.11	.92	2.17	.91	2.09	.88	2.18	.91	2.28	.89	2.22	.91
22. There are certain competencies every teacher must have & they should be tested for these competencies. * a	1.66	.84	1.70	.89	1.61	.84	1.60	.76	1.64	.76	1.76	.91	1.80	.78	1.72	.75
23. Parents of inner-city youngsters are not really interested in how or what their children do in school. * (1) (5)	3.18	.96	3.03	1.00	3.16	.87	3.09	.95	3.10	.90	3.02	.91	3.19	.80	3.28	.82
24. Inner-city schools are definitely inferior to those found in the suburban areas. * (1) (5)	2.68	.99	2.47	1.00	2.89	.92	2.68	.97	2.77	.95	2.75	.99	2.87	.82	2.75	.93
25. Consideration should be given to eliminating compulsory school attendance requirements. a	3.37	.92	3.21	1.12	3.45	.88	3.39	.98	3.37	.90	3.37	1.02	3.39	.96	3.33	.99
26. It's important for prospective teachers to spend a lot of time in K-12 schools with students. (4)	3.30	.76	3.07	.85	3.07	.99	3.21	.82	3.15	.84	3.17	.84	3.34	.70	3.34	.69

Table II

	2011				2111				2000				Other			
	Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
27. The instructors in education courses should be good role models for prospective teachers. (4)	3.50	.81	3.55	.74	3.52	.70	3.60	.55	3.61	.64	3.53	.76	3.63	.53	3.65	.55
28. Labeling a child 'retarded' 'disturbed', 'blind' is inappropriate. (3)	3.01	1.05	2.88	1.18	3.03	1.06	3.02	1.12	2.86	1.03	2.70	1.14	2.84	1.05	2.60	1.09
29. People generally do not do the best they can under the circumstances. * (2)	2.39	1.00	2.52	1.09	2.51	.95	2.58	.96	2.38	.98	2.39	.91	2.48	.89	2.75	1.01
30. The most important courses in my bachelor's program are my education courses. (4)	2.79	1.00	2.81	1.04	2.22	1.12	2.29	1.10	2.72	1.06	2.55	1.11	3.11	.92	3.07	.89
31. Parents should have more to say about the way schools are run & the way children are taught. (1)	3.10	.83	3.05	.87	2.99	.91	2.90	.91	2.90	.93	2.88	.98	2.86	.87	2.92	.90
32. Exceptional children require a curriculum radically different from normal children. * a	2.36	.90	2.40	.91	2.41	.98	2.47	1.01	2.59	.94	2.67	.95	2.48	.86	2.64	.89
33. Grouping of children according to standardized test scores is an acceptable educational practice. * (1)	3.07	.88	2.91	1.01	2.96	.96	3.07	.94	3.14	.89	3.08	.96	2.98	.92	3.07	.92
34. The majority of teachers do an adequate job. (1)	2.82	.77	2.72	.85	2.52	.80	2.52	.85	2.54	.84	2.52	.82	2.70	.91	2.52	.86
35. There is the opportunity in the teacher preparation program for me to pursue some of my own interests. (4)	3.20	.77	3.06	.78	2.75	.94	2.66	.91	3.17	.78	3.03	.84	3.36	.62	3.17	.76
36. Knowing the cause of a child's handicap is not necessary to planning appropriate learning experiences. * (3)	3.02	1.11	3.02	1.14	3.24	.95	3.43	.93	3.34	.91	2.74	1.24	3.34	.97	2.99	1.23
37. I believe that teaching in an inner-city school would be a personally rewarding experience. (1) (5)	2.84	.99	2.82	.96	2.66	1.00	2.57	1.02	2.70	.99	2.71	1.02	2.96	.85	2.81	.90
38. Differences in achievement between inner-city children & others can be attributed to genetics & heredity.* (1)(5)	3.10	.95	3.09	.98	3.06	.94	2.98	.98	3.17	.96	3.13	.97	3.17	.96	3.30	.86
39. How we behave depends on how we see a situation. (2)	3.27	.71	3.18	.78	3.43	.68	3.31	.73	3.42	.67	3.29	.80	3.45	.59	3.31	.84
40. Legal rights of children & youth are being adequately protected in most schools today. (1)	2.79	.83	2.80	.85	2.72	.87	2.60	.89	2.82	.81	2.75	.84	2.88	.93	2.72	.98

Table II

	2011				2111				2000				Other			
	Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
41. Education courses are easy. * (4)	2.93	.81	2.70	.95	2.65	.92	2.65	.94	2.88	.84	2.84	.96	2.87	.76	2.86	
42. Public education adequately serves most handicapped individuals. (3)	2.10	.87	2.22	.90	1.91	.87	2.11	.93	1.95	.83	2.10	.94	2.05	.82	2.06	.88
43. Present use of I.Q. tests is frequently inappropriate. (1)	2.94	.84	2.87	.85	2.99	.87	3.01	.89	3.06	.86	3.17	.94	2.75	.92	2.99	.86
44. Schools should have students representing various socio-economic, racial, & religious groups. (1) (5)	2.82	.84	2.98	.88	2.74	.96	2.90	.86	2.99	.90	2.85	.96	3.01	.85	3.10	.90
45. Human behavior is generally not rational or understandable. * (2)	2.97	.93	2.97	.91	2.93	.94	2.94	.90	3.02	.88	2.97	.92	2.95	.90	3.08	.86
46. The first few years of life are not important in the development of adult personality. * (2)	3.48	1.03	3.31	1.17	3.36	1.09	3.48	1.02	3.51	1.00	3.42	1.10	3.66	.78	3.66	.87
47. All students should be expected to attain the same standards of achievement, regardless of their family backgrounds and, personal motivations. * (1) (5)	2.98	1.18	2.88	1.18	3.02	1.07	2.95	1.08	2.96	1.21	3.22	.97	2.97	1.07	2.98	1.07
48. Most school administrators are concerned about the intellectual, moral, and social development of each learner. (1)	2.71	.84	2.64	.95	2.40	.94	2.44	.97	2.42	.91	2.39	.93	2.55	.93	2.63	.77
49. Education courses are not practical. * (4)	3.61	.64	3.37	.94	3.34	.77	3.26	.87	3.47	.73	3.38	.81	3.69	.57	3.50	.76
50. Children have the ability to think like adults. * (2)	2.81	1.06	2.76	1.14	2.74	1.02	3.06	1.00	2.73	1.11	2.89	1.08	2.88	1.05	3.05	1.08

* Negative statements. Statistics reported reflect reverse scoring.

[a] Not used in a subscale

1. American School Scale
2. Human Development Scale
3. Special Education Scale
4. Teacher Education Scale
5. Multicultural Education Scale

A second instrument was developed as a semantic differential scale with 36 paired terms (see Table III). This scale was composed of four subscales with 9 paired terms each for obtaining attitudinal responses of 1 to 9 for the American school, mainstreaming, human development, and teacher education. About half of the paired terms were reversed on the original instrument in order to control for response set. These have been reversed for presentation here.

Both scales were constructed by the authors with colleagues who teach the courses serving as a panel for critiquing the original set of items, providing suggestions for revisions or additions, and for obtaining as estimate of construct validity. Coefficients of reliability for the scales are .60 on the pretest and .66 on the posttest. These estimates of internal consistency were obtained through use of the Cronbach Alpha Coefficient.

The two scales were administered to all students enrolled in the three courses during the first two weeks of classes during the 1980 spring semester. Posttest measures were obtained during the final week of classes, or during the final examination period. Students enrolled in more than one of the courses were identified and thus not permitted to score the pre and post tests more than once. Administrations were conducted by Teacher Corp personnel or graduate students working under direction of the research team.

Statistical Analyses

Following the posttest, student responses to the two scales were transferred to data coding sheets for card punching, performed by the Memphis State University Computer Center.

Analyses of the data were accomplished by discriminant function analyses using procedures available in SPSS (Nie, 1975). Discriminant function analysis was selected so that the discriminating variables could be weighted and

Table III. Total Group Pre and Post Means and Standard Deviations on the Semantic Differential Scale (N=490)

I believe the American public school is:		Pre		Post		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	p
rigid - flexible	1.	4.29	1.32	4.23	1.36	
disorganized - organized	2.	4.00	1.47	4.13	1.42	
boring - stimulating	3.	4.03	1.24	3.98	1.28	
restrictive - permissive	4.	4.57	1.36	4.48	1.35	
unsystematic - systematic	5.	4.26	1.43	4.35	1.35	
unresponsive - responsive	6.	4.18	1.31	4.21	1.27	
traditional - progressive	7.	3.93	1.50	3.81	1.46	
constrained - free	8.	4.25	1.42	4.25	1.38	
inadequate - adequate	9.	3.66	1.64	3.93	1.58	<.05
Placing handicapped/exceptional children in regular classrooms (mainstreaming) is:						
inconsistent - consistent	10.	3.91	1.48	4.22	1.52	<.05
intimidating - supportive	11.	4.54	1.60	4.80	1.38	<.05
stifling - enriching	12.	4.77	1.52	4.92	1.43	
required - voluntary	13.	4.28	1.57	3.81	1.62	<.001
simple - complicated	14.	2.82	1.29	2.88	1.40	
restrictive - freeing	15.	3.95	1.53	4.18	1.40	<.05
ineffective - effective	16.	4.63	1.58	4.88	1.45	<.05
rejecting - accepting	17.	4.58	1.51	4.70	1.45	
rigid - flexible	18.	4.33	1.41	4.39	1.35	

Table III continued

I believe that people are basically:		Pre		Post		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	p
unpredictable - predictable	19.	4.01	1.69	4.33	1.67	<.005
rigid - flexible	20.	4.66	1.32	4.65	1.27	
indifferent - warm	21.	4.39	1.34	4.49	1.34	
unfair - fair	22.	4.74	1.13	4.81	1.16	
unable - able	23.	5.19	1.14	5.20	1.14	
unworthy - worthy	24.	5.14	1.25	5.07	1.20	
disorganized - organized	25.	4.18	1.19	4.34	1.25	<.05
simple - complex	26.	4.77	1.55	4.70	1.55	
foolish - wise	27.	4.43	1.00	4.32	1.06	<.10
I expect my teacher preparation program to be:						
unsystematic - systematic	28.	5.62	1.21	5.48	1.25	<.10
static - dynamic	29.	5.14	1.34	5.09	1.39	
irrelevant - relevant	30.	5.81	1.17	5.62	1.30	<.05
passive - active	31.	5.69	1.24	5.50	1.36	<.05
boring - stimulating	32.	5.93	1.22	5.76	1.33	<.05
unnecessary - necessary	33.	6.03	1.20	5.94	1.17	
impractical - practical	34.	5.95	1.14	5.81	1.26	<.10
unscholarly - scholarly	35.	5.79	1.18	5.68	1.36	<.01
weak - strong	36.	5.92	1.21	5.91		

linearly combined to determine how the groups might be found to differ on both pre and post measures. Discriminating functions of the subscales of the two instruments were derived along with discriminating power of the individual items comprising the various subscales.

RESULTS

The 50-item Likert-type attitude scale was found to discriminate significantly on the pre and post measures for subjects enrolled in the three courses, $p < .001$ (#36, 9). Also, four of the subscales of the questionnaire discriminated between the groups on pre-post measures. These subscales and individual items contributing to the discriminating power were the American school, $p < .07$ (#11, 24, 18, 17), multicultural education, $p < .10$ (#11, 24, 16), human development, $p < .01$ (#13, 39, 50, 19), and mainstreaming, $p < .001$ (#36, 9, 42, 28).

On pretest measures only, questionnaire items as a total set, were found to significantly discriminate among the groups, $p < .001$ (#30, 35, 49) along with only one subscale, teacher education, $p < .001$ (#30, 35, 49). On the posttest measures, the total scale discriminated among the groups, $p < .001$ (#36, 35, 30) as did three of the subscales, multicultural education, $p < .15$ (#47, 11, 10, 24, 44), mainstreaming, $p < .001$ (#36, 28, 9) and teacher education, $p < .001$ (#30, 35, 49).

When the questionnaire data were analyzed by groups based on enrollment in one, two, or three courses during the same semester, significant discriminant functions were found only for the teacher education subscale, $p < .05$ on the pretest (#30, 35, 49, 26) and on the posttest, $p < .10$ (#30, 35, 49, 26).

Three subscales of the semantic differential were found to discriminate between pre and posttest responses. They were human development, $p < .005$

(#19, 25, 27), mainstreaming, $p < .001$ (#13, 10, 11, 16, 15), and teacher education, $p < .05$ (#35, 30, 31, 32, 34, 28). Without regard to subscale, the best pre-post discriminators are items #13, 10 and 19 at $p < .001$.

Analyses of the semantic differential pretest observations only demonstrated that two of the subscales, American school, $p < .10$ (#5, 9, 6, 4, 2) and teacher education, $p < .05$ (#33) discriminated significantly among the four groups. For the posttest observations, the American school, $p < .07$ (#9, 6, 3, 2, 5, 4), mainstreaming, $p < .10$ (#13, 16, 12, 11, 14, 17), and teacher education, $p < .001$ (#33, 34, 32, 36, 28, 31) all discriminated significantly among the groups. (See Table IV.)

Discriminant function analyses of the semantic differential observations for the groups enrolled in one, two, or three courses during the same semester resulted in significant discriminant function only for the pretest measures on the American school subscale, $p < .05$ (#6, 8, 7). However, the pattern disappeared on post responses.

DISCUSSION

Student groups in the three introductory foundation courses investigated in the spring semester of 1980 reflect similar attitudes toward the American public school and those dimensions associated with mainstreaming of exceptional learners and multicultural education. Also, group attitudes, as measured by the scales used, are similar in regard to human development and teacher education. As shown in the data reported, item pre and posttest means and standard deviations remained, for the most part, stable over the two administrations. Likewise, group subscale means and standard deviations on both pre and post measure of the two scales were comparable.

In regard to the general structure of attitudes observed for the total group of 490 students, the strongest positive attitudes (means above 3.0)

Table IV. Group Means and Standard Deviations for the Semantic Differential (N=4)

	2011 N=94				2111 N=129				2000 N=184				Other N=83				
	Pre		Post		Pre		Post		Pre		Post		Pre		Post		
1. I believe the American public school is:	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	F Prob.
rigid - flexible	4.23	1.45	4.28	1.36	4.43	1.37	4.32	1.52	4.25	1.25	4.15	1.35	4.25	1.27	4.20	1.56	
disorganized - organized	4.24	1.40	4.43	1.46	3.78	1.46	3.85	1.54	4.04	1.48	4.13	1.27	3.99	1.52	4.22	1.46	p<.05
boring - stimulating	4.05	1.31	4.31	1.38	3.99	1.22	3.81	1.27	4.05	1.26	3.89	1.21	4.02	1.19	4.08	1.28	p<.05
restrictive - permissive	4.30	1.43	4.22	1.41	4.85	1.32	4.57	1.41	4.49	1.38	4.61	1.29	4.61	1.25	4.34	1.32	p<.05 p<.10
unsystematic - systematic	4.69	1.33	4.66	1.30	4.00	1.49	4.20	1.41	4.21	1.41	4.30	1.32	4.29	1.42	4.40	1.32	p<.01 p<.10
unresponsive - responsive	4.54	1.24	4.60	1.16	4.02	1.28	3.91	1.42	4.10	1.30	4.17	1.19	4.18	1.38	4.33	1.22	p<.05 p<.001
traditional - progressive	3.90	1.57	3.73	1.53	3.94	1.43	3.86	1.49	3.90	1.54	3.80	1.39	3.99	1.48	3.86	1.49	
constrained - free	4.30	1.23	4.23	1.37	4.31	1.54	4.19	1.40	4.04	1.41	4.30	1.36	4.52	1.43	4.24	1.42	p<.10
inadequate - adequate	4.06	1.52	4.49	1.55	3.30	1.64	3.51	1.64	3.67	1.66	3.95	1.48	3.76	1.62	3.93	1.54	p<.01 p<.001

Table IV continued

2. Placing handicapped/exceptional children in regular classroom (mainstreaming is:	2011 N=94				2111 N=129				2000 N=184				Other N=83				
	Pre		Post		Pre		Post		Pre		Post		Pre		Post		
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{Y}$	S.D.	F Prob.
inconsistent - consistent	3.80	1.64	4.09	1.54	3.93	1.54	4.16	1.52	3.95	1.39	4.22	1.49	3.93	1.42	4.47	1.56	
intimidating - supportive	4.14	1.66	4.79	1.35	4.53	1.69	4.55	1.52	4.70	1.49	4.90	1.26	4.54	1.60	4.95	1.44	p<.10
stifling - enriching	4.46	1.62	4.91	1.47	4.66	1.57	4.65	1.49	4.89	1.41	5.02	1.37	5.01	1.52	5.12	1.40	p<.10 p<.10
required - voluntary	4.28	1.61	3.87	1.63	4.42	1.51	4.23	1.50	4.18	1.55	3.60	1.64	4.27	1.66	3.52	1.63	p<.01
simple - complicated	2.86	1.28	2.96	1.42	2.81	1.28	2.72	1.34	2.74	1.34	2.79	1.40	2.93	1.19	3.22	1.42	p<.10
restrictive - freeing	3.94	1.56	4.33	1.46	3.88	1.50	4.00	1.46	3.86	1.51	4.18	1.36	4.24	1.57	4.27	1.33	
ineffective - effective	4.60	1.75	4.81	1.50	4.51	1.69	4.57	1.57	4.70	1.48	4.99	1.35	4.67	1.44	5.18	1.32	p<.05
rejecting - accepting	4.48	1.46	4.69	1.55	4.57	1.55	4.50	1.48	4.60	1.53	4.78	1.40	4.66	1.46	4.81	1.40	
rigid - flexible	4.41	1.40	4.34	1.33	4.40	1.38	4.30	1.38	4.33	1,46	4.42	1.32	4.17	1.39	4.51	1.38	
3. I believe that people are basically:																	
unpredictable - predictable	4.14	1.62	4.35	1.63	3.98	1.71	4.19	1.79	3.98	1.75	4.35	1.65	3.96	1.61	4.46	1.56	
rigid - flexible	4.95	1.20	5.00	1.31	4.53	1.34	4.39	1.25	4.62	1.41	4.69	1.28	4.61	1.19	4.78	1.10	p<.01
indifferent - warm	4.50	1.33	4.55	1.43	4.35	1.32	4.43	1.20	4.39	1.35	4.42	1.34	4.31	1.39	4.67	1.42	
unfair - fair	5.02	1.07	5.00	1.27	4.74	.97	4.73	1.11	4.72	1.19	4.79	1.10	4.48	1.22	4.77	1.23	p<.05
unable - able	5.46	1.01	5.45	1.08	4.98	1.09	5.18	1.16	5.20	1.20	5.14	1.34	5.22	1.16	5.08	1.17	p<.05
unworthy - worthy	5.11	1.20	5.26	1.17	5.15	1.24	5.04	1.23	5.13	1.30	4.99	1.15	5.20	1.20	5.11	1.27	
disorganized - organized	4.34	1.20	4.61	1.31	4.12	1.21	4.23	1.16	4.19	1.15	4.18	1.23	4.03	1.20	4.57	1.29	p<.05
simple - complex	4.69	1.44	4.80	1.54	4.78	1.65	4.68	1.53	4.79	1.55	4.68	1.64	4.77	1.56	4.66	1.43	
foolish - wise	4.54	.94	4.33	1.08	4.29	.89	4.39	1.01	4.51	1.05	4.23	1.09	4.39	1.09	4.41	1.02	

Table IV continued

4. I expect my teacher preparation program to be:	2011 M=94				2111 N=129				2000 N=184				Other N=83				
	Pre		Post		Pre		Post		Pre		Post		Pre		Post		
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	F Prob.
unsystematic - systematic	5.78	1.10	5.60	1.14	5.53	1.23	5.22	1.27	5.57	1.26	5.59	1.29	5.69	1.17	5.52	1.21	p<.10
static - dynamic	5.30	1.25	4.99	1.39	5.09	1.27	4.93	1.28	5.13	1.40	5.28	1.39	5.06	1.42	5.01	1.37	
irrelevant - relevant	5.93	1.06	5.59	1.39	5.66	1.23	5.43	1.30	5.82	1.22	5.77	1.23	5.90	1.04	5.63	1.30	
passive - active	5.80	1.10	5.65	1.38	5.38	1.32	5.22	1.31	5.79	1.22	5.92	1.39	5.82	1.21	5.58	1.31	p<.05 p<.10
boring - stimulating	6.00	1.13	5.89	1.37	5.74	1.22	5.43	1.36	6.04	1.22	5.95	1.27	5.89	1.29	5.70	1.29	p<.01
unnecessary - necessary	6.22	.99	6.13	1.15	5.84	1.24	5.51	1.32	5.98	1.28	6.14	1.04	6.24	1.14	5.93	1.09	p<.05 p<.001
impractical - practical	6.02	1.02	6.05	1.15	5.79	1.17	5.41	1.33	6.03	1.17	5.98	1.21	5.95	1.15	5.76	1.22	p<.001
unscholarly - scholarly	5.95	1.08	5.65	1.38	5.75	1.13	5.47	1.29	5.73	1.26	5.70	1.35	5.80	1.20	5.35	1.43	
weak - strong	6.01	1.24	6.04	1.16	5.78	1.17	5.63	1.29	5.90	1.26	6.13	1.09	6.05	1.11	5.63	1.27	p<.001

detected by the Likert-type instrument were:

- believing that learning problems can be solved by sensitive and resourceful teachers. (#9)
- understanding human growth and development as requiring interaction with children and adults. (#13)
- elimination of compulsory school attendance requirements. (#25)
- self-image as an important factor in determining behavior.(#14)
- importance of prospective teachers spending a lot of time in K-12 schools with students. (#26)
- believing that instructors in education courses should be good role models. (#27)
- perceiving the teacher preparation program to provide opportunity to pursue individual interests. (#35)
- seeing behavior as dependent on how we perceive situations. (#39)

Strong group attitudes were registered for several of the items stated in the negative. Those obtaining the strongest group disagreements were:

- special education classes being harmful. (#2)
- public funds used to support private/parochial schools. (#3)
- curriculum today being the same as it was in the 1940s and 1950s. (#6)
- there being one way to train a teacher. (#8)
- teachers avoiding discussing problems associated with minority groups. (#11)
- children having it easier today. (#12)
- teaching ability as being natural and not teachable. (#20)
- inner-city parents not being interested in their children. (#23)
- acceptance of grouping based on standardized test scores. (#33)
- not needing to know the causes of a handicap when planning learning experiences. (#36)
- attributing achievement differences in children to heredity. (#38)
- the first years of life not being important. (#46)
- education courses not being practical. (#49)

Group attitudes found to be the strongest (means above 4.5) by the semantic differential scale were related to mainstreaming being supportive, enriching, effective, and accepting; people as flexible, fair, able, worthy, and complex; and teacher preparation expected to be systematic, dynamic, relevant, active, stimulating, necessary, practical, scholarly, and strong. Negative group attitudes (means less than 4.5) were associated with the American public school being rigid, disorganized, boring, restrictive, unsystematic, unresponsive, traditional, constrained, and inadequate. Negative group attitudes

(means less than 4.5) were associated with the American public school being rigid, disorganized, boring, restrictive, unsystematic, unresponsive, traditional, constrained, and inadequate. Negative group attitudes were also reported for mainstreaming being inconsistent, required, simple, restrictive, and rigid. The negative perceptions of people observed by the semantic differential scale were in regard to people being unpredictable, indifferent, disorganized, and foolish.

The discriminant function analyses used to treat the data so that the groups would be as statistically distinct as possible revealed interesting patterns which can only be summarized here. Both scales were found to discriminate between the four groups on pre-post measures, on pretest measures alone, and on posttest measures. The 50 item scale was found to discriminate in the pre-post comparisons, as did all the subscales except teacher education. However, the teacher education subscale, as well as the total scale discriminated on the pretest comparison, both also discriminated when the posttest only data were analyzed. The subscales on multicultural education and mainstreaming were significant in discriminant functions on both pre-post comparisons and posttest analysis. The American school and human development scales did not significantly discriminate among course areas in either pre or post measures in isolation, but did discriminate between test items.

The 50 item scale did not provide discriminant functions when the comparisons were made on groups enrolled in one, two, or three courses during the same semester. One subscale forming the 50 item scale did, however, perform discriminating functions. This was the teacher education scale which discriminated on both pre and post data comparisons.

The semantic differential scale was found to have discriminating power in pre-post data comparisons and in the separate comparisons using only pretest data and posttest data, when the comparisons were based on groups enrolled in the three courses. Potency of the items on these discriminating analyses varied considerably with 14 different items loading high, but in varying degrees and varied consistency, in the three comparisons. The teacher education subscale significantly discriminated in all three comparisons, pre-post, pre, and post. The American school subscale discriminated significantly in two comparisons, pre and post analyses. The human development subscale was a significant discriminator only on the pre-post analysis, while the mainstreaming subscale discriminated on the pre-post analysis as well as the post only comparisons.

The semantic differential scale's 36 items discriminated only in the pretest comparisons when the analysis was derived from group scores based on the number of courses being taken in the semester. Only one of the subscales was found to significantly discriminate among the groups enrolled in one, two, or three courses. This was the American school scale which discriminated when the pretest data were analyzed.

An extended analysis of the pre to post discriminations revealed interesting patterns which will be treated briefly. The following material summarizes the results of pre to post statistical treatments of the scales and findings related to items contributing to the discriminating potency of the measures. The summary is also based on a qualitative examination of the influences the three courses appeared to have on attitudinal changes of the students.

Student groups were found to vary in their responses to the stimuli used to assess attitudes and these variations were detected by potent discriminating

indexes. However, the extent to which the planned, intended experiences of the three courses individually, or collectively, contributed to these variations cannot be easily answered. In regard to student perceptions of their teacher education program, it is obvious that high pretest means become lower on the posttest on all items of the semantic differential subscale. The questionnaire items dealing with teacher preparation did not yield responses which were potent in discriminating pre to post. Thus, the semantic differential scale had more utility in this study. Though student responses declined pre to post on the teacher preparation subscale, the positive expectations for the program remained even after a study experience in at least one course. Attitudes toward teacher education were consistently more positive, as observed in all groups, than were attitudes toward other aspects of American education sampled by the two scales.

The impact of the courses on attitudes toward special education and mainstreaming seems to be apparent. Both scales contained items focusing on special education/mainstreaming which had potent discriminating power when the total scales were analyzed pre to post. In the case of the questionnaire, the only items found to discriminate pre to post when the total scale was analyzed were two items sampling attitudes regarding special education. The semantic differential scale, as a total set, was also found to discriminate pre to post on the basis of two items focusing on mainstreaming, plus one additional item dealing with human development. Also, both scales contained subscales which sampled attitudes toward special education/mainstreaming and both subscales were found to discriminate between the pre and post observations. On most special education items, the pre to post changes were in the desired direction. This was true for items on both scales.

The two subscales containing items to elicit attitudes regarding human

development were also found to discriminate between the students groups, pre to post. The shifts in attitudes detected, however, are mixed with some being positive and others negative. The course in human development, 2111, did not appear to be more influential in shifting responses associated with human development. The other courses, with one exception, seemed to be as influential in producing attitude changes, both positive and negative, as did the human development course, even with the content of the items focused clearing on human development content.

Questionnaire items soliciting attitudinal responses relative to the American public school and multicultural education were found to discriminate pre to post. This was not the case, however, for American school subscale items on the semantic differential scale. Responses obtained by the three discriminating items dealing with multicultural education revealed less desirable attitudes obtained on the posttest. The special education course appeared to be the one course that did not influence these shifts. Two items, in particular, were responsible for generating the discriminating functions of both the multicultural and American education subscales and both were associated with less desired posttest attitudes. Two other items of the American education subscale did possess potency and both items reflected positive shifts though the group means remained negative, i.e., below 2.5. Course means indicate that these changes occurred in all instructional groups with the course focusing directly on American education and multicultural education not influencing change more than the other two courses. On the semantic differential scale, the items of the American school subscale had the lowest and most negative means on both the pre and post tests, though the subscale and individual items, did not discriminate pre to post. Negative attitudes were reflected across the instructional groups and the 2011 course was not found to differ in its influence.

CONCLUSIONS

While the analyses clearly reflect that course enrollments are associated with differing attitudinal responses on pre and most measures, the manner in which the specific courses, individually or collectively, influence these shifts is not clear. In some cases, all three courses appeared to influence students in responding in the more desirable direction. On the other hand, the reverse was found. At times, the pattern was mixed. Also, shifts, either positive or negative, were not consistently related to specific instructional focus of the courses. The evidence presented here does support the thesis that some attitudes are susceptible to change and that the changes can be detected over a brief span of time. However, it is not clear how the socializing forces of introductory courses in professional education relate to these observed changes. That shifts in student attitudes do occur, however, is a beginning and worthy of further exploration.

A perplexing matter observed in these data involves the extent to which changes observed shifted toward the negative. Though such shifts were not consistent across the various domains, or clearly associated with enrollment in a given course, the extent and manner in which they were observed needs serious study. Student views, it would seem, are susceptible to being altered, if only, at time, it is in a direction not intended by those who are responsible for providing the course instruction.

This exploratory analysis has not produced results which can be utilized in framing a professional culture, or in clearly indicating the kinds of reform needed in the introductory courses in teacher preparation. It does, however, provide an insightful profile of attitudes maintained by students beginning their studies in teacher education and it reflects an initial probe into how study experiences do influence, or do not influence, student attitudes.

The major importance of the study may rest on the process it reflects, in that the professionals responsible for teacher education at one institution have begun a systematic investigation into the socializing forces of their institution. This, alone, is a needed development in the schools of education in this country.

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